

Archived at the Flinders Academic Commons:

<http://dspace.flinders.edu.au/dspace/>

This is the publisher's copyrighted version of this article.

The original can be found at: <http://www.anzsys.org/index.php/anzsys08-conference/anzsys08papers/anzsys08-papers/Don-Houston-Influencing-the-influencers-of-learning.pdf/>

© 2008 ANZSYS

Published version of the paper reproduced here in accordance with the copyright policy of the publisher. Personal use of this material is permitted. However, permission to reprint/republish this material for advertising or promotional purposes or for creating new collective works for resale or redistribution to servers or lists, or to reuse any copyrighted component of this work in other works must be obtained from ANZSYS.

# Influencing the influencers of learning: Academic Development as Systemic Intervention

Don Houston,  
Staff Development and Training Unit, Flinders University  
[Donald.Houston@Flinders.edu.au](mailto:Donald.Houston@Flinders.edu.au)

## Abstract

*This paper presents a perspective on the connections between systems thinking and systemic practice, higher education as a system, and academic development as a field of practice within higher education. The field of academic development is characterised by dilemmas, tensions and uncertainties of identity, place and practice as the functions of academic development diversify in an increasingly demanding and complex environment. The paper explores several inter-related propositions. Firstly, that systems thinking provides some potentially useful lenses for exploring the complex and contested system that is academic development. Secondly, methods and methodologies from within systemic practice can add greatly to the effectiveness of academic development interventions towards improvement. Thirdly, academic development provides a means to promote systems thinking and systemic practice in higher education. Systems concepts and systems thinking provide useful insights to help recast the dilemmas and challenges as opportunities to progress the ideas and practices of academic development. By modelling systems thinking and systemic intervention in their own work, and introducing their clients to systems ideas and practice, Academic Developers are well placed to help realize the potential of systems thinking and systemic practice in higher education.*

## Keywords

Academic development, higher education, systems thinking, systemic intervention

## INTRODUCTION SYSTEMS IDEAS, HIGHER EDUCATION AND ACADEMIC DEVELOPMENT

This paper presents a perspective on the connections between systems thinking and systemic practice, higher education as a system, and academic development as a field of practice within higher education. The paper explores several inter-related propositions. Firstly, that systems thinking provides some potentially useful lenses for exploring the complex and contested system that is academic development. Secondly, methods and methodologies from within systemic practice can add greatly to the effectiveness of academic development interventions towards improvement. Thirdly, academic development provides a means to promote systems thinking and systemic practice in higher education.

The field of academic development is characterised by dilemmas, tensions and uncertainties of identity, place and practice as the functions of academic development diversify in an increasingly demanding and complex environment. As a newly arrived novice in the field of academic development exploring the literature of the field, I find myself immersed in debates rehearsing those that have occurred in systems thinking and practice over the past two decades. The idea(l)s and commitments of critical systems thinking seem to me to offer useful perspectives on and additions to these debates about academic development.

Many authors (Banathy 1999, Galbraith, 1999, Ison 1999, Weil, 1999) have reflected on the range of potential applications of systems thinking in higher education to course design; for thinking about and effecting change in organizations in higher education; and for thinking about the sector as a whole. These authors present strong arguments and advocacy for systems thinking and systemic practice in higher education. Systemic practice, however, is notable by its absence. The same observation holds true for systems ideas and practice in the realm of academic development. Systems ideas have occasionally surfaced in the literature about learning and teaching (for example Biggs, 1999) but do not seem to have gained traction or wide acceptance in the teaching and learning literature or the academic development literature. Nevertheless, systems practices seem to offer much to academic development as this paper attempts to illustrate.

This paper begins a brief account of my journey into academic development via my experience as an academic and my engagement with systems thinking and systemic practice. The body of the paper explores what I see as the potential of critical systems thinking to frame ideas about Academic Development as a field of practice. It also provides some illustrative examples of systems methods used in interventions for Academic Development. The paper concludes with observations and reflections on the powerful potential of academic development to

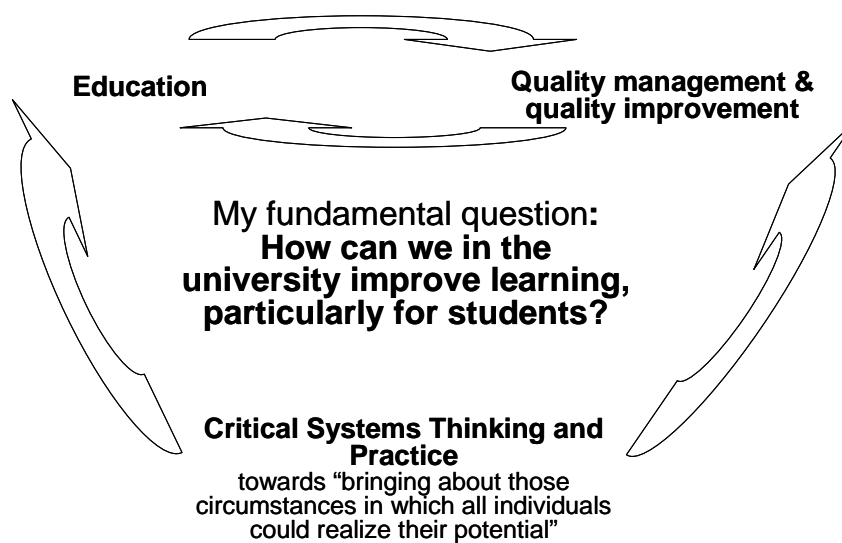
promote systemic practice in higher education through its own use of systems ideas and methods in interventions for improvement.

### **My journey to Academic Development**

My journey to academic development has been guided by my fundamental question: how can we in the university improve learning, particularly for students? I acknowledge, however, that for much of the journey the question remained unarticulated. My underlying motivation throughout my career has been and remains to work towards improving the quality of learning offered by my place of work. This question and motivation has been shaped by some thirty years of experience in tertiary education as firstly a student and later as a researcher, curriculum designer and university academic staff member.

Variations on this question are shared by many in the field of academic development.

While making my way to my current place as a recently appointed academic developer, I have engaged with issues of quality in higher education from a variety of perspectives, assessment policy and practices, policy formation and implementation for learning and teaching and the challenges of academic work as well as engaged with the whole of a university academic's experiences, challenges and frustrations. In each of those engagements I have attempted to influence the influencers of learning, whether students, colleagues, departmental managers, 'the university' or the wider higher education community, towards improving learning. Along the way I encountered a body of theory and practices – critical systems thinking and systemic practice (Flood and Jackson, 1991; Jackson, 2000; Midgley, 2000) - which has provided conceptual insights, framing questions and methodologies that have proven useful in structuring and moving towards resolution of many issues and challenges in a variety of complex social contexts like higher education. The connections between these influences around my fundamental question are sketched in Figure 1.



*Figure 1: Influences around my fundamental question*

In my studies towards my PhD, I attempted with some limited success to apply critical systems thinking and practice as means towards finding and sharing answers to my fundamental question at the level of a single department in one university (see Houston, 2008). In the oral examination of my thesis, one of the examiners (Gerald Midgley) asked the question: "might a more successful strategy in the long run have been to change the remit of the intervention altogether in order to work with educational campaigners on future visioning of higher education?" Gerald also helpfully pointed me to Wendy Gregory's (2000) work "Transforming Self and Society". Reflecting on these prompts encouraged me to refocus my efforts away from direct interactions with students and very local interventions as an insider academic and towards other opportunities to influence the influencers of learning. The result of those refocused efforts is my current engagement as an Academic Developer.

## THE NATURE OF ACADEMIC DEVELOPMENT

Arriving as a new Academic Developer, I got on with the work of doing academic development, while engaging with the growing literature in and around that work.

The activities I am currently doing, as outlined in Table 1, are indicative of the multiple dimensions of Academic Development work:

➤ Facilitate curriculum mapping and renewal project for all undergraduate courses in one School.
➤ Contribute to an international development project linking universities to industry stakeholders
➤ Provide professional support for Teaching Quality Network and learning and teaching awards and grants applicants [internal and external schemes].
➤ Research and publish on aspects of academic development and my disciplinary/trans-disciplinary interests.
➤ Develop briefing paper on strategy to support academic staff to integrate graduate qualities into course curricula across the University for Assistant Vice Chancellor (Academic).
➤ Design and deliver workshops on curriculum, assessment, and evaluating teaching
➤ Design and implement a new year-long development program, 'Accelerate your Research Program' to enhance the research performance of participants [20+ academics]
➤ Design and deliver workshops for sessional staff: 'Introduction to teaching' and 'Introduction to assessment'
➤ Write topic on 'assessment and evaluation' for the Graduate Certificate in Education (Higher Education)
- fully develop teaching modules
- design assessment mechanisms
➤ Deliver the Graduate Certificate in Semester 1, 2009 (with Academic Development Team)
➤ Deliver the [mandatory] Foundations of University Teaching program twice a year (with other team members)
➤ Design and implement a 3-Day intensive academic development program to enhance research output for staff in a remote site
➤ Attend Teaching and Learning Committee meetings for two faculties
➤ Expand staff development opportunities for sessional staff both central and faculty based

*Table 1: My range of Academic Development work*

Reflecting on these activities, prompted me to think about the purpose and goals of academic development: why do these things? In general terms, all of these tasks are intended to improve learning through influencing a variety of groups who in turn are able to more or less directly influence policy and processes that impact on learning. Gosling (2001) provides a more formalized statement of the goals of academic development

1. Improvement of teaching and assessment practices, curriculum design, and learning support – including the place of information technology in learning and teaching.
2. Professional development of academic staff, or staff development.
3. Organizational and policy development within the context of higher education.
4. Learning development of students – supporting and improving effective student learning.
5. Informed debate about learning, teaching, assessment, curriculum design, and the goals of higher education.
6. Promotion of the scholarship of teaching and learning and research into higher education goals and practices.

He suggests that these six goals represent the full range activities within the concept of higher education development but provide no account of what constitutes improvement or development. The goals do, however,

suggest that development must occur throughout an institution, and beyond its boundaries, if it is to impact on organizational change. They also reflect the expanding boundaries of academic development as it has responded to, and attempted to influence change in higher education systems. Akerlind (2005) and Gosling (2001) amongst others have noted that, particularly in the UK and Australia, the growth of academic development has been prompted by widespread changes in the environment around higher education particularly government concerns with accountability for and evaluation of academic and institutional performance. As policies and accountability mechanisms have changed, so has the focus and breadth of academic development activities. Academic Development in its earliest manifestations focused on the improvement of the teaching skills of individual academic staff. Over time, academic development has widened its focus from developing the instrumental performance of individual staff to improving conceptual and practical understanding of learning and teaching, to the scholarly and political development of institutional approaches to learning and teaching.

Issues of identity in and around academic development are reflected in organizational artefacts of the variety of names and organizational positioning of Academic Development units and Academic Developers. While many Academic Developers occupy academic positions, a significant proportion of academic development positions continue to be classified as general or administrative staff positions. Similarly a variety of labels are applied to the work by those doing it. These range from staff development through educational development to faculty development (the common term in the USA) to professional development and, of course, academic development. Each of these carries connotations and implications and their juxtaposition points to the challenges and dilemmas of theory and practice faced by the academic development community.

The impact of changing environments, expectations and constraints on academic developers has been reflected in the literature on academic development. Rowland (2007, 9) in the *International Journal for Academic Development* notes "Out of 69 articles in the last five consecutive volumes (2001-2006) of this journal, 22 focused on the role and identity of academic (or educational) developers." He proceeds to explore academic development as a "site of creative doubt and contestation". Holmes and Grant (2007, 3) describe Rowland's paper, and the others published with, it as a way of giving voice to the questions and problematics that have circulated since the beginnings of academic development – as part of a moment of "prising open its assumptions in order to think otherwise". Similarly the uncertain location of academic development work in the university's power structure places academic developers in an ambiguous position: as promoters of academic values and, at the same time, as foot soldiers of the administration and representatives of 'the University' (Rowland, 2007).

Lee and McWilliam (2008) have extracted from the Academic Development literature a series of binary statements, which they argue illustrate many of the dilemmas faced by academic developers. The pairs [and in some cases triplets] of statements are reproduced in table 2 below. They are not ordered in any particular way nor do the columns have any significance in themselves. However they do illustrate that these dilemmas range through issues of knowledge/power, culture and identity, organizational position and structure, and process and method, all framed by issues of purpose.

We come to develop you	You are already fully developed	
We are your teachers	We are your colleagues	
Our knowledge can improve your teaching	You already know how to teach	
We are responsible for improving the quality of teaching and learning	You are responsible for improving the quality of teaching and learning	[We share the responsibility for improving ....]
We are central to teaching and learning	We are marginal to teaching and learning	
We work centrally	We work locally	
We know better than you	You know better than we do	You know as well as we do
We are above you	We are below you	We are beside you
We are everywhere	We are nowhere	
We are your coaches	We are your servants	We are your peers
We are the transmitters of university policy	We are autonomous scholars of teaching and learning	
We are on their side	We are on your side	

We are service providers	We are academics JUST as all academics are service providers	
We are practice-based	We are theory- and research-based	
You can trust us	Can we trust you?	

Table 2. Propositions about academic development (from Lee and McWilliams, 2008)

The literature in Academic Development suggests that the community is embroiled in similar debates of identity, purpose and practice to those that affected the systems movement in the 1980s and 1990s. The systems movement emerged from those debates with not a single identity, not a dominant theory, not a dominant methodology but rather with some agreement on foundational commitments. These fundamental commitments not only accommodate but welcome and embrace diversity. Those commitments potentially provide a useful frame for thinking about and acting towards academic development.

## CRITICAL SYSTEMS THINKING AS A FRAME FOR ACADEMIC DEVELOPMENT

Critical Systems Thinking (CST), despite variations in the definitions given to it, is built on three dominant commitments: critical awareness, methodological pluralism and the promotion of human improvement (Jackson, 2000; Midgley, 2000). Critical awareness requires critical reflection on theory, methodology and methods, and the relationships between them. It also requires an explicit sociological awareness because societal and organizational forces can cause methodologies to fall in or out of favour with researchers and practitioners.

CST recognises the opportunity that a diverse range of methodologies and methods presents. Rightness becomes a matter of appropriateness, as certain systems methodologies and/or creative designs of methods (Midgley, 2000) are better suited to certain problems and problem contexts.

CST's third commitment to human improvement is directed towards "bringing about those circumstances in which all individuals could realize their potential" (Jackson, 2000, 376).

These commitments have been enacted through various approaches including Total Systems Intervention in its various manifestations (Flood & Jackson 1991; Flood, 1995; Jackson 2000) and Midgley's (2000) Systemic Intervention.

Midgley (2000, 129) defines systemic intervention as "purposeful action by an agent to create change in relation to reflection on boundaries". He argues "there is no such thing as a genuinely comprehensive analysis, so the defining feature of systems thinking is reflection on the *boundaries* of inclusion and exclusion" (Midgley, 2000, 7-8 italics in original). Boundary judgements define what is considered relevant (and conversely what is not relevant) and the assumptions that make up social systems (such as a university). For Midgley (2000, 138)

... boundaries are [human] constructs, and may therefore be placed in a variety of different places, bringing forth markedly different 'realities'; they are associated with values, in that different values (associated with different ideas of improvement) may result in boundaries being constructed in different places; participation from a variety of stakeholders is important, because different stakeholders bring different insights to bear; and even our most cherished ideas should be subject to critique from time to time to test their worth in the light of other value systems.

Midgley (2000, 135), reflecting on the intimate connection between boundaries and values, argues that boundary critique "... is essential if we are not to simply take for granted assumptions flowing into interventions". He also emphasises the importance of issue-related questioning and knowledge-related questioning in the role of the intervener in creative design of methods. His observation that "knowledge-related questioning is vital if we are to begin to see the development of systemic intervention methodology as a *learning process* for intervening agents" (Midgley, 2000, 230, italics in original), is particularly pertinent to academic development as intervention given its underlying purpose of improving learning and the dilemmas and challenges facing the community.

### Dissolving and resolving dilemmas of academic development

The boundary concept and the importance of reflection on boundaries have been touched on tangentially in some of the literature about academic development. For example, Prosser et al. (2008, 13) argue that "The challenge, for staff developers is to develop insights into the whole of a university teacher's awareness and then to help them look beyond this awareness." Gaining such insights into the whole experience requires reflection on the boundaries that define the 'whole'. Boundary critique can help deal with the relational paradoxes - "we come to develop you [but] you are fully developed", "we are your teachers, we are your colleagues" and "our knowledge can improve your teaching, you already know how to teach" (Lee and McWilliam, 2008) - between

academic developers and academics by providing a mechanism for them to reflect together on the boundaries of awareness and develop beyond them. By recognising that different boundaries exist and by moving between them or moving them, academic developers can reposition themselves in relation to others as simultaneously teachers and colleagues and learners.

We come to develop you		You are already fully developed within your boundaries of awareness	<i>We together can reflect on your boundaries of awareness and develop beyond them</i>
We are your teachers	AND	We are your colleagues	<i>We can learn from each other, just as we all can learn from colleagues</i>
Our knowledge can improve your teaching		You already know how to teach	<i>We together can reflect on your boundaries of awareness of teaching and develop beyond them</i>

*Table 3a: Resolving dilemmas through reflections on boundaries*

Additionally, appreciating the concept of recursion and recognizing the existence of different sub-systems with the system can help to resolve some of the identity dilemmas faced by the academic development community. Some of the tensions represented in the next several pairs presented by Lee and McWilliam can be dissolved by recognising that the expertise and responsibility of academic developers and those they engage with focus at different recursive levels within the university. Academic developers' responsibility and expertise are applied across the levels of the university, while the expertise of academics, for example, focuses at interactions with students and colleagues within particular local departmental and disciplinary contexts. As a consequence of academic developers working towards improvement throughout the university, they are simultaneously central and marginal to teaching and learning and need to work centrally and locally, as particular circumstances require, to influence the influencers of learning. Academic developers consequently are above, below and beside in different interventions at different times and different places.

We are responsible for improving the quality of teaching and learning <i>across the university</i>	AND	You are responsible for improving the quality of teaching and learning <i>for your students in your courses</i>	We share the responsibility for improving ....
We are central to teaching and learning <i>across the university</i>		We are marginal to teaching and learning <i>for particular students</i>	<i>We influence the influencers of learning. Academics directly influence student learning.</i>
We work centrally	AND	We work locally	<i>We work wherever we can contribute to improving learning.</i>
<i>We may know better than you about theory and research on learning and teaching</i>		<i>You know better than we do about your own particular circumstance</i>	<i>You know as well as we do the challenges around improving practice</i>
We are above you		We are below you	We are beside you

*Table 3b: Repositioning academic development through reflections on recursions and sub-systems.*

Ashby's Law of Requisite variety -"only variety destroys variety" or as Beer expresses it "variety absorbs variety" – also provides useful insights for academic development. As Academic Developers, if we are to adjust to changes and expectations from our environments, our actions and methods must be as varied as the patterns in

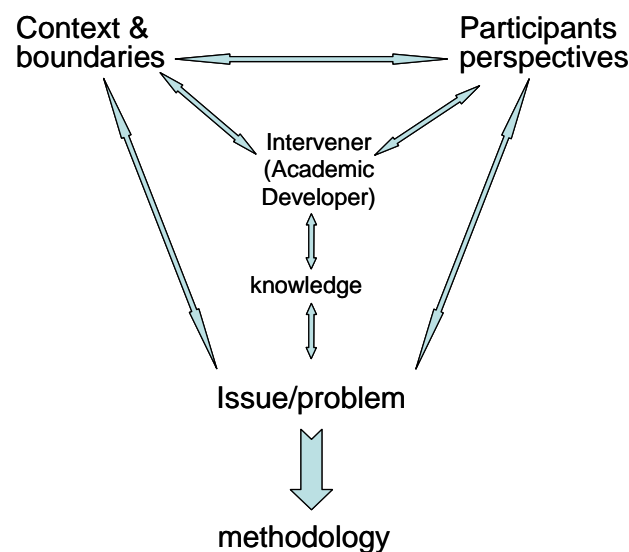
the changes and expectations we are exposed to. Academic Developers at the intersection of complex networks of interests need to be able to draw on a repertoire of methodologies, methods and skills as diverse as the expectations and demands placed on them. Ashby's Law can also be interpreted in relation to the organizational positioning of Academic Development as centralized or distributed or simultaneously centralized and distributed depending on the particular environmental circumstances of a particular institution. The law also suggests the pursuit of the 'one true way' or 'one true place' for AD is potentially counter productive.

Considering these tensions and dilemmas by reflecting on boundaries, recursions and related systems ideas provides useful insights into the position of academic development within the university as a system. As shown, systems ideas and systems thinking provides some potentially useful lenses for exploring the complex and contested system that is academic development.

### Reflections on practice: Academic Development as systemic intervention

Ulrich (2001) has argued that competence in systemic practice and research is determined more by the questions we ask than the answers we find. It seems to me that this holds true with respect to academic development as systemic practice. Ulrich's Critical Systems Heuristics (CSH) could provide a starting point for negotiating the system of concern in particular circumstances.

CSH begins by focusing on clients and purposes of the system. The dilemma of "we are on their side; we are on your side" can be resolved by a clarity of purpose that "academic developers are on the side of improving learning" and an understanding that interventions should be shaped around that foundational commitment. Using Ulrich's questions can then help to develop understanding of what is and what should be to identify appropriate means for improvement in the circumstance. These ideas and practices provide a means to help academic developers to become expert in the artful act of questioning about participants perspectives and expectations, contexts and boundaries, issues and problems, and their own knowledge.



*Figure 1: the objects of artful questioning to shape intervention*

Asking questions not presenting answers, and encouraging and assisting the exploration of possibilities may be an appropriate way for academic development to initially engage with each of its many clients in its multiple environments as the first stage of systemic intervention. The questions asked of individual academics interested in improvement in their practice will be different to those asked of an academic department facing issues of course design. Those asked of a senior academic manager seeking assistance to develop and implement new policy will be different yet again. Nevertheless, in every case asking, listening and reflecting on the answers should help guide academic developers to apply good practices suited to the issues and challenges that participants see.



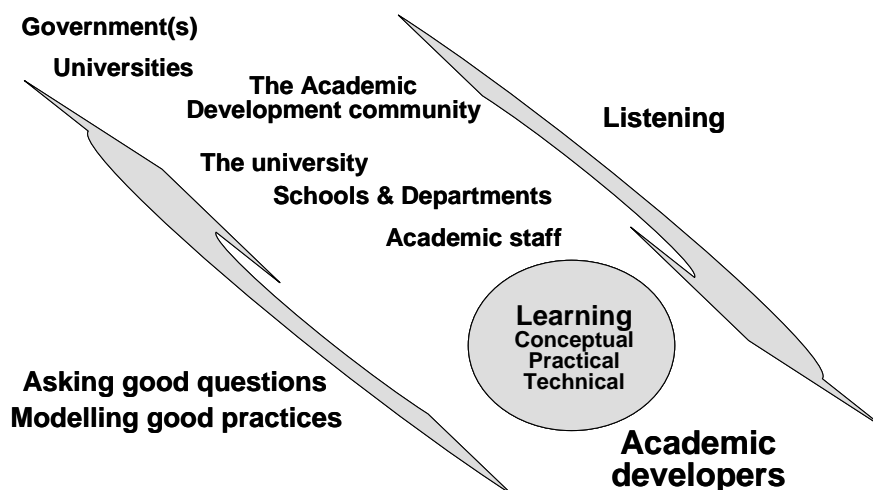


Figure 2: Asking good questions to influence the influencers of learning.

Questioning and engaging with ideas provide a platform to plan appropriate interventions to do good academic development work. Critical reflection on interventions and outcomes in particular circumstances can enable academic developers and those with whom they work to contribute to the learning process about academic development as theory and in practice and the possible varieties of interventions. This virtuous cycle of critical questioning, informed choice, intervention and critical reflection towards improvement provides a systematic framework to guide academic development as systemic intervention to improve learning (figure 3).

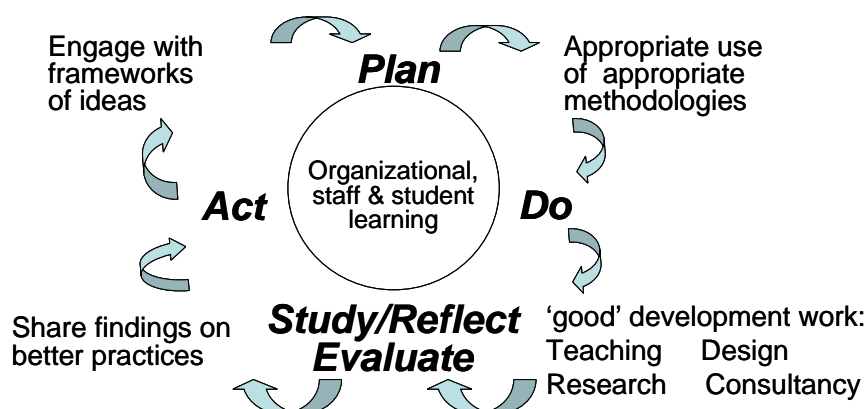


Figure 3: A systematic framework for the Academic Development cycle

By keeping in mind the cycle presented in Figure 3, Academic Developers may be able to resolve or at least accommodate some of the dilemmas of roles and practice they face. At different points in the cycle we may adopt different roles and shift our relationships with other participants. For example in policy development and implementation, Academic Developers in the role of autonomous scholars of teaching and learning engage with frameworks of educational ideas to influence the university's planners of the intent and shape of policy. Once policy is formulated, the role may shift to transmitters of established policy to others responsible for implementing it. Later we may have a role to play in evaluating and reflecting on both design and implementation to share good practices and to identify opportunities for improvement. While we may not fully endorse policy as implemented, we are able to take some comfort from knowing that we are able to bring our repertoire of expertise to bear to influence the policy influences on learning at different times in different ways.

### Systemic academic development in action: some examples

Table 4 below reproduces parts of the list of my academic development tasks presented earlier in Table 1. It illustrates the presentation of information about systems ideas, the incorporation of systems thinking and the use of systems methodologies in different interventions in a range of circumstances working with a range of clients.

- Facilitate curriculum mapping and renewal project for all undergraduate courses in one School.
  - *using Beer's Viable Systems Model to describe course functions, and the concept of recursion to explain the relationship between a course and the subjects within it*
  - *using Ackoff's Interactive Planning to design ideal [and possible] new courses*
- Contribute to an international development project linking universities to industry stakeholders
  - *using VSM as a design guide*
- Research and publish on aspects of academic development and my disciplinary/trans-disciplinary interests.
  - *research on the relationships between systems ideas and systemic intervention and academic development (see for example this paper)*
- Develop briefing paper on strategy to support academic staff to integrate graduate qualities into course curricula across the University for Assistant Vice Chancellor (Academic).
  - *a key focus of the paper is the need for a planned, systemic approach rather than piecemeal activities*
- Design and deliver workshops on curriculum, assessment, and evaluating teaching
  - *including introducing participants to systems ideas of alignment, interactions between the elements of a course, the need for critical reflection on practice for improvement as part of systemic educational practice*
- Design and implement a new year-long development program, 'Accelerate your Research Program' to enhance the research performance of participants [20+ academics]
  - *introducing participants to Ulrich's CSH as a framework for thinking about the design of their research program*
- Design and deliver workshops for sessional staff: 'Introduction to teaching' and 'Introduction to assessment'
  - *including introducing participants to systems ideas of alignment, interactions between the elements of a course, the need for critical reflection on practice for improvement as part of systemic educational practice*

*Table 1: Examples of my Academic Development work as systemic intervention*

While not all elements of my work immediately indicate opportunities for applying systems methods, they all provide opportunities to view and think about resolving issues, challenges and problems systemically. Planning and design activities at various recursions of the learning system (the university, a department, a course, a subject) present opportunities to systemic design and planning methodologies and models like the VSM and Interactive Planning. Working directly with academics provides opportunities to introduce individuals and groups to the possibilities presented by systems ideas and systemic intervention.

## **CONCLUSION:**

As suggested by Lee and McWilliam (2008), academic development is seen in many ways. Academic development is everywhere and nowhere. Academic Developers are coaches, servants and peers. Academic development is in the centre but not necessarily of the centre. What is agreed is that academic development and academic developers have organizational legitimacy as change agents. My own experience of attempting systemic intervention in a university suggests that individual academics working within normal university structures and rules are able to directly influence the learning of 'their' students. They also may be able to

influence other influencers of learning within their own organizational unit. They, however, are less able to exercise influence in other contexts. Increasing my potential to change the broader system of learning required for me a change of self in relation to the system. Hence my move into academic development. Academic developers are better placed to influence the influencers of learning in different ways in different contexts through systemic intervention. Thinking and acting systemically can clarify the places of academic development in the university and strengthen its influence on the system. By modelling systems thinking and systemic intervention in their own work, and introducing their clients to systems ideas and practice, Academic Developers are potentially well placed to help realize the potential of systems thinking and systemic practice in higher education.

## REFERENCES:

- Akerlind, G. (2005) Academic growth and development – how do university academics experience it? *Higher Education*, 50, 1, 1-32.
- Banathy, B. H. (1999). Systems Thinking in Higher Education: Learning comes into focus. *Systems Research and Behavioural Science*, 16, 133-145.
- Biggs, J. (1999). What the student does: teaching for enhanced learning, *Higher Education Research and Development*, 18, 1, 57-75.
- Flood, R. L. (1995). *Solving problem solving: A potent force for effective management*. Chichester: John Wiley & Sons.
- Flood, R. L., & Jackson, M. (1991). Total systems intervention: a practical face to critical systems thinking. In R. L. Flood & M. Jackson (Eds), *Critical systems thinking: Directed readings*. Chichester: John Wiley & Sons.
- Galbraith, P. L. (1999a). Systems thinking: a missing component in higher education planning? *Higher Education Policy*, 12, 141-157.
- Gosling, D (2001) Educational development units in the UK – what are they doing five years on? *International Journal for Academic Development*, 6, 1, 74-90
- Gregory, W. (2000) Transforming self and society: A “critical appreciation” model, *Systemic Practice and Action Research*, 13, 4, 475-501.
- Holmes, T. and Grant, B. (2007) Thinking otherwise in academic development, *International Journal for Academic Development*, 12, 1, 1-4
- Houston, D. J. (2008) Systemic intervention in a university department: Reflections on arrested action research, *Systemic Practice and Action Research*, 21, 1, 133-152.
- Ison, R. (1999). Applying systems thinking to higher education, *Systems Research and Behavioural Science*, 16, 107-112.
- Jackson, M. C. (2000). *Systems approaches to management*. New York: Kluwer Academic/Plenum Publisher
- Lee, A. and McWilliam, E. (2008) What game are we in? Living with academic development, *International Journal for Academic Development*, 13, 1, 67-77
- Midgley, G. (2000). *Systemic intervention: Philosophy, methodology, and practice*. New York: Kluwer Academic/Plenum Publishers.
- Prosser, M., Martin, E., Trigwell, K., Ramsden, P. and Middleton, H. (2008) University academics’ experiences of research and its relationship to their experience of teaching, *Instructional Science*, 36, 1, 3-16.
- Rowland, S. (2007) Academic development: A site of creative doubt and contestation, *International Journal for Academic Development*, 12, 1, 9-14..
- The Law or Requisite Variety Principia Cybernetica Web <http://pespmc1.vub.ac.be/REQVAR.html> accessed 19/6/2008
- Ulrich, W. (2001). The quest for competence in systemic research and practice. *Systems Research and Behavioural Science*, 18, 3-28.
- Weil, S. (1999). Re-creating universities for ‘beyond the stable state’: From ‘Dearingsque’ systematic control to post-Dearing systemic learning and inquiry. *Systems Research and Behavioural Science*, 16, 171-190.

## **COPYRIGHT**

Don Houston ©2008. The author/s assign Edith Cowan University a non-exclusive license to use this document for personal use provided that the article is used in full and this copyright statement is reproduced. Such documents may be published on the World Wide Web, CD-ROM, in printed form, and on mirror sites on the World Wide Web. The authors also grant a non-exclusive license to ECU to publish this document in full in the Conference Proceedings. Any other usage is prohibited without the express permission of the authors.